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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,233	11/03/2003	James Michael Quackenbush	019377-00100	3765

7590

11/02/2006

John Wilson Jones  
Attn: IP Docketing Clerk  
Locke, Liddell & Sapp LLP  
600 Travis, Suite 3400  
Houston, TX 77002

EXAMINER
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RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/700,233

Applicant(s)

QUACKENBUSH, JAMES  
MICHAEL

Examiner

Vickey Ronesi

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 15-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. All outstanding rejections are overcome by applicant's response filed 10/19/2006.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. In light of applicant's arguments and upon updating the search, new grounds of rejection have been set forth below. The finality of the previous Office action has been withdrawn. Thus, the following action is non-final.

#### ***Claim Objections***

4. Claims 4-8 and 20 are objected to because of the following reasons:

With respect to claims 4-6, the term "the alicyclic carboxylic acid anhydride" lacks full antecedent basis because claim 1 only provides for language "alicyclic acid anhydride."

With respect to claims 7 and 8, the term "the aromatic carboxylic acid anhydride" lacks full antecedent basis because claim 1 only provides for language "aromatic acid anhydride."

With respect to claim 20, at the end of the claim the language, "anhydride; anhydride" appears to be a typographical error.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. Claims 15-17 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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With respect to claim 15, it is dependent on canceled claim 13.

With respect to claim 28, the term “the sand particles” lacks antecedent basis.

With respect to claims 16 and 17, they are rejected for being dependent on a rejected claim.

***Claim Rejections - 35 USC § 103***

6. Claims 18-24 and 27 are obvious over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster et al (US 3,341,555).

Egan discloses an acid-resistant flooring composition comprising an epoxy resin such as Araldite which contains epoxy and a hardener (page 1, line 49), sand filler, and granite chips (page 1, lines 29-32). The exemplified amount of epoxy to hardener is 5:3 (page 1, lines 54-55), wherein the ratio of filler to epoxy resin is 7:1 thus providing for an amount of hardener of 4.7 to 18.8 wt %.

Egan is silent with respect to the addition of at least one carboxylic acid anhydride as the hardener.

Nonken teaches that Araldite resins contain either a dibasic acid anhydride or polyamine hardener wherein the dibasic acid anhydride hardener includes hexahydrophthalic anhydride (col. 5, lines 21-27).

Given that Egan teaches the use of Araldite resins and its variations (page 1, line 49) and further given that Nonken teaches that Araldite resins contain a dibasic acid anhydride such as hexahydrophthalic anhydride, it would have been obvious to one of ordinary skill in the art to

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utilize an acid anhydride as the Araldite hardener of Egan, there being no expected or surprising results by using the acid anhydride over polyamine.

While the combined teachings of Egan and Nonken provide for an acid anhydride such as hexahydrophthalic anhydride, it fails to teach other acid anhydride hardeners for epoxy resin.

Wooster et al discloses a mixture of carboxylic acid anhydrides for use as a curing agent in epoxy resins comprising hexahydrophthalic anhydride, tetrahydrophthalic anhydride, and phthalic anhydride (col. 7, lines 1-14), wherein this mixture provides for a stable homogeneous liquid composition at ambient temperatures (col. 2, lines 21-50) which is just as effective as other anhydrides (col. 3, lines 3-13). The addition of other cyclic anhydrides such as methyltetrahydrophthalic acid are also taught (col. 4, line 50).

Given that Egan and Nonken teach acid anhydride epoxy hardeners and further given the teachings by Wooster et al regarding the benefits had by using a mixture of aromatic and alicyclic acid anhydrides as hardeners, it would have been obvious to one of ordinary skill in the art to utilize a mixture of acid anhydrides as the hardener of Egan to obtain a more stable composition.

7. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster et al (US 3,341,555) and further in view of Betts (US 3,924,880).

The discussion with respect to Egan, Nonken, and Wooster et al in paragraph 6 above is incorporated here by reference.

Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.

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Betts teaches that laboratory counter tops are made of highly acid resistant materials such as epoxy resin (col. 1, lines 6-14). With respect to the heat-activated catalyst, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to use heat and a heat-activated to prevent premature curing or to accelerate curing. Wooster et al teaches suitable amines as cure activator (col. 4, line 60 to col. 5, line 6), which include polyamines and imdiazoles.

Given that acid-resistant compositions like those taught by Egan are used in laboratory countertops as taught by Betts and further the teachings by Wooster et al regarding suitable cure activators, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop with the presently claimed cure activator.

8. Claims 1-12, 15-17 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314) and Wooster et al (US 3,341,555) and further in view of Wypych (*Handbook of Fillers*).

The discussion with respect to Egan, Nonken, and Wooster et al in paragraph 6 above is incorporated here by reference.

Egan discloses that granite chips have a particle size of 3-20 mm (page 1, lines 29-32), wherein the volume ratio of granite to sand ranges from 1.0:1.2 to 1.0:2.7 (page 1, lines 36-38). Note that granite and sand have approximately the same density (about 2.6 g/m<sup>3</sup>) and therefore, even though the ratio of granite to sand is less than presently claimed, the ratio reads on the presently claimed ratio if separated out when a portion of the sand is in the larger particle portion.

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Egan is silent with respect to the size or size distribution of the size particles.

Wypych teaches that sand conventionally has a particle size of 2-90 microns (page 144).

Given that Egan teaches the use of sand and further given that sand conventionally has a particle size of 2-90 microns, it would have been obvious to one of ordinary skill in the art to utilize conventional particle sizes of sand, including those presently claimed.

9. Claims 32, 33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan (GB 2 110 693) in view of Nonken (US 3,812,314), Wooster et al (US 3,341,555), and Wypych (*Handbook of Fillers*) and further in view of Betts (US 3,924,880).

The discussion with respect to Egan, Nonken, Wooster et al, and Wypych in paragraph 8 above is incorporated here by reference.

Egan fails to disclose the use of its acid-resistant composition in a countertop or a heat-activated catalyst.

Wooster et al teaches suitable amines as cure activator (col. 4, line 60 to col. 5, line 6), which include polyamines and imdiazoles.

Betts teaches that laboratory counter tops are made of highly acid resistant materials such as epoxy resin (col. 1, lines 6-14).

Given that acid-resistant compositions like those taught by Egan are used in laboratory countertops as taught by Betts, it would have been obvious to one of ordinary skill in the art to utilize Egan's composition in a countertop and to use suitable amines like presently claimed as a cure activator as taught by Wooster et al.

*Response to Arguments*

10. Applicant's arguments filed 10/19/2006 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that Nonken does not disclose a combination of acid anhydride hardeners; (B) that Wypych does not disclose epoxy resin; and (C) that Betts makes no mention or suggestion of using a countertop material composition as described by applicants.

With respect to argument (A), Nonken provides a teaching regarding Araldite resins. It is used as a teaching reference, and it is therefore not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). The combination was taught by secondary reference Wooster et al in the above prior art rejections.

With respect to argument (B), Wypych is used only provide a teaching regarding sand particle size. It is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981).

With respect to argument (C), while Betts does not disclose all the features of the presently claimed invention, it is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches that materials for use in floor applications



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are also advantageously used in countertops and in combination with the primary reference, discloses the presently claimed invention.

*Conclusion*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/27/2006  
Vickey Ronesi



**CALLIE E. SHOSHO**  
**PRIMARY EXAMINER**